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| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
|----------------------------|-------------|----------------------|---------------------|------------------|
| 10/786,386 | 02/23/2004 | Daisuke Saito | 10921.206US01 | 2886 |
| 23552 | 7590 | 07/01/2004 | EXAMINER | |
| MERCHANT & GOULD PC | | | | EASTHOM, KARL D |
| P.O. BOX 2903 | | | | PAPER NUMBER |
| MINNEAPOLIS, MN 55402-0903 | | | | 2832 |

DATE MAILED: 07/01/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

| | | | |
|------------------------------|----------------------------|---------------------|-----------|
| Office Action Summary | Application No. | Applicant(s) | |
| | 10/786,386 | SAITO ET AL. | |
| | Examiner Karl D Easthom | Art Unit 2832 | <i>Am</i> |

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) Responsive to communication(s) filed on _____.
 2a) This action is FINAL. 2b) This action is non-final.
 3) Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) Claim(s) 1-5 is/are pending in the application.
 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
 5) Claim(s) _____ is/are allowed.
 6) Claim(s) 1-5 is/are rejected.
 7) Claim(s) _____ is/are objected to.
 8) Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) The specification is objected to by the Examiner.
 10) The drawing(s) filed on _____ is/are: a) accepted or b) objected to by the Examiner.
 Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
 Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
 11) The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
 a) All b) Some * c) None of:
 1. Certified copies of the priority documents have been received.
 2. Certified copies of the priority documents have been received in Application No. _____.
 3. Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ . |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date <u>2/23/11</u> | 6) <input type="checkbox"/> Other: _____ |

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1. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

2. Claim 5 is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. The term “the auxiliary upper electrodes” lacks antecedent basis, due to the word “upper” rendering the claims unclear.

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. Claims 1-3 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kambara et al.in view of Oh. Kambara discloses the claimed invention except the auxiliary and side electrode layers made of carbon-paste, at Fig. 8 with resistor film 12, upper electrodes 13a, cover coat 14b, auxiliary electrode 13b, side electrode layer 13c, and nickel and soldering layers 13d. Oh discloses using carbon paste as a substitute for metal pastes at col. 3, lines 55-65, and col. 5, lines 55-65, for the side and auxiliary layers 24 because it is less expensive than silver, so that it would have been obvious to employ the carbon for that reason. For claim 3, Oh disclose using the bottom electrode 26 of the same carbon paste at the noted passages covered as claimed for the purpose of forming an inexpensive yet effective connection.

5. Claim 5 is rejected under 35 U.S.C. 103(a) as being unpatentable over Kambara et al.in view of Oh, as applied to claims above, further in view of Hanamura. The claimed invention is disclosed a noted above except the cutout in the auxiliary electrode. Hanamura at col. 5, lines

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55-65, and see Fig. 6, discloses the cutout in auxiliary electrode 13b to allow direct contact to the upper electrode via the plated layers for lower resistivity connection, so that such a cutout would have been obvious where Kambara expresses the same desire of low resistivity connection at col. 3, lines 10-55.

6. Claim 4 is rejected under 35 U.S.C. 103(a) as being unpatentable over Kambara et al.in view of Oh, as applied to claims above, further in view of Yoneda. The claimed invention is disclosed as noted above except the overcoat. Yoneda discloses the overcoat 53 to better cover the device and to flatten it at col. 5, lines 43-57, so that such a cutout would have been obvious where Kambara expresses the same desire of low resistivity connection at col. 3, lines 10-55.

7. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Karl D Easthom whose telephone number is (571) 272-1989. The examiner can normally be reached on M-Th, 5:30AM-4:00PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Elvin Enad can be reached on (571) 272-1990. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).


Karl D Easthom
Primary Examiner
Art Unit 2832

KDE